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NO. 66

LABORATORY BULLETIN

DEPARTMENT OF HEALTH & ENVIRONMENTAL SCIENCES, HELENA, MONTANA

No. 66 Editor: David B. Lackman, Ph.D., Administrator, Laboratory Division
September 30, 1976

MICROBIOLOGY AND MEDICAL TECHNOLOGY

The statutory mission of our Microbiology Laboratory Bureau is public health microbiology (bacteriology, immunology, virology, parasitology, mycology). Although we may, at times, be involved in the area of medical technology because of requests for consultation from the Licensing & Certification Bureau of the Hospital & Medical Facilities Division, microbiology is our major concern. Because of financial stringencies, even it is becoming increasingly difficult to cover.

As far as the Department is concerned, our direct involvement with Medical Technology is in the Hospital & Medical Facilities Division (Medicare / Medicaid). The National Proficiency Examinations announced in the laboratory bulletins are administered for the Licensing & Certification Bureau of that Division. The position in the Bureau (and the Department) most directly involved with medical technology is :

INSPECTOR, NURSING HOMES & HOSPITALS I - (Laboratory background) -
(G. 13) - for assignment to the Division of Hospital and Medical Facilities. These positions have been filled by medical technologists

There are two organizations recently established in Montana for dealing with the private sector of the practice of medicine - of which medical technology is a part. They are the Montana Foundation for Medical Care (PSRO) and the Montana Health Systems Agency, Inc. It would be appropriate to refer certain concerns in the field of medical technology to them.

ANTIBIOTIC SENSITIVITY TESTING

Except for acid-fast organisms (tuberculosis), antibiotic sensitivity tests are not performed in our laboratory. However, problems do arise in clinical laboratories during testing. We would urge you to refer them to your consulting pathologist. His laboratory will usually be able to do tube-dilution procedures to iron out anomalies encountered with discs. The Mayo Medical Laboratories (see previous bulletins) also has quantitative antibiotic susceptibility testing available (pg. 12 of their catalogue). A helpful guide for antimicrobial disc susceptibility tests is provided by the National Committee for Clinical Laboratory Standards. It is available from the National Committee for Clinical Laboratory Standards, 771 E. Lancaster Avenue, Villanova, PA 19085. The cost is \$3.00, postpaid. It is published under the title Approved Standard: ASM-2 Performance Standards for Antimicrobial Susceptibility Tests.

POISON CONTROL NETWORK FOR MONTANA

The Emergency Medical Services Bureau is working towards one. Locally, the Pharmacy at St. Peter's Hospital in Helena has access to the National Information Service. Both hospitals in Great Falls have emergency services for poisonings. The reason for bringing this subject to your attention is that we have some telephone numbers which might be useful to you.

University of Washington - School of Pharmacy - Drug Information -
24 hour service (206) 543-9487 (Seattle)
Poison Control Center - Seattle - (206) 634-5252
Poison Control Center - Denver - (303) 893-6000
Poison Control Center - Salt Lake - (801) 581-2151
Poison Control Center - Deaconess Hospital in Spokane - (509) 747-1077
Poison Lab - Daniel T. Teitelbaum, M.D. - Denver - (303) 758-0403

MICROBIOLOGY

Hi-jacked mail : There were quite a number of laboratory reports in this mail which was found many months later in the bottom of a well; and then kept by the postal service for evidence. When it was received in the department, about all we could do was forward it to the original addressee.

Streptococcal throat cultures : Making a decision as to whether to take a throat culture for streptococci often results in frustration. The Wisconsin laboratory bulletin for May-June 1976 has a section : THROAT CULTURES. It is mostly a discussion of material from : J. Am. Med. Ass'n. 235 : 913-914, 1976 by Lewis W. Wannamaker, M.D., of Minneapolis. These documents have been much needed; and are excellent and timely. If you would like a copy of this section from the Wisconsin bulletin - let me know.

Chief, Microbiology Laboratory Bureau : Bud Brown, currently chief of the bureau, retires on October 1, 1976 after thirty-four years of service in the department. Arthur C. Knight, M.D., F.C.C.P., Acting Director of the Department of Health and Environmental Sciences, has appointed ~~William Eugene Mead, D.V.M.~~, as Bud's successor. Gene Mead received his doctoral degree from the University of Montana and most recently has been employed by St. Patrick's Hospital in Missoula.

Reports : Much of our reporting consists of copies made by the Xerox process. Information which you supply also appears on the form. If black or red ink isn't used, our clerical personnel must trace over what you have written - and this delays reporting. PLEASE USE BLACK OR RED INK WHEN FILLING OUT SUCH FORMS AS THESE COLORS COPY BEST.

VIROLOGY

Influenza : Although the A/New Jersey/76 isolate of influenza virus has the same antigenic formula (H_{sw}1N1) as swine influenza virus, there has been no association, during the Ft. Dix episode, with swine. Confusion on this point in the public mind is of concern to swine producers and others. A/New Jersey/76 is a virus of human origin. The July 1976 monthly letter of the Animal Health Division, Department of Livestock, discusses this misapprehension and extends a note which

appeared in CDC Veterinary Public Health Notes for May 1976. The concluding statement from CDC : "Thus, the A/New Jersey influenza is a human disease, and person-to-person spread is the expected mode of transmission."

Here is a summary of results to September 15 of our serological survey for influenza antibodies.

May 25 - September 15, 1976

Montanans tested for influenza hemagglutination-inhibition antibodies

Number of persons with antibody titers :					
≥ 10	≥ 40	≥ 10	≥ 40	≥ 10	≥ 40
A/Victoria/75		A/New Jersey/76		B/Hong Kong/72	
329/688(48%)	149/688(22%)	78/688(11%)	49/688(7%)	152/556(27%)	43/556(8%)

The occasional high titer observed in the A/New Jersey/76 ≥40 group adds substance to a statement from the CDC bulletin. "Recent surveillance has indicated that true swine influenza continues to circulate in swine herds just as it has for decades with no recognized changes in virulence or distribution. Persons with frequent exposure to swine, such as swine veterinary practitioners, swine producers, and abattoir workers, have a higher rate of antibody to swine influenza virus than persons not in contact with swine, as was demonstrated in studies over a decade ago. The swine influenza viruses are apparently of low pathogenicity for man, and most infections result in no clinical illness although persons in close contact with swine frequently develop influenza antibody. Thus, contact with swine or swine products has not been demonstrated to increase the risk of exposure to, or infection with, highly virulent influenza viruses."

There have been six isolations of B/Hong Kong/5/72 influenza viruses reported from the United States since May 22, 1976. The latest came from Michigan and Missouri. This is a virus to watch; especially during the early part of 1977.

RICKETTSIOLOGY

Worthy of special note is a paper on Rocky Mt. spotted fever : Sexton, Daniel J., M.D. and Burgdorfer, Willy, Ph.D. : Clinical and Epidemiological Features of Rocky Mountain Spotted Fever in Mississippi, 1933-1973. Southern Medical Journal 68:1529-1535, Dec. 1975. Particularly helpful is their interpretation of laboratory results. "Cases were defined as confirmed if they had a typical clinical history associated with one or more of the following : (1) a convalescent complement fixation (CF) titer greater than 1:8 against spotted fever group antigens, (2) a convalescent Weil-Felix (WF) titer of 1:160 or greater, or (3) a fourfold rise in either test."

"In public health, research is not an end in itself but only a means to an end. Once research brings out the hazardous effects of cigarette smoking, for example, or automobile design, low level radiation, or new drugs, the next step is to take effective action to protect the public against the hazard."
 Irwin D. J. Bross, Ph.D., Roswell Park Memorial Institute, Buffalo

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